Amendments to the Claims

1. (currently amended) A method of making a rheology-modified aqueous composition comprising admixing a material or materials whose constituents ~~substantially~~ conform to the proportions of the empirical formula

$$M'_mM''_n(OH)_{(2m+3n+qa+br)}(A^q)_a(B^r)_b \cdot xH_2O,$$

where M' represents at least one divalent metal cation and m is an amount of from greater than zero to about 8;

where M" represents at least one trivalent metal cation and n is an amount of from greater than zero to about 6;

where A is an anion or negative-valence radical that is monovalent or polyvalent, and a is an amount of A ~~ions~~ of valence q, provided that if A is monovalent, a is from greater than zero to about 8, and if A is polyvalent, a is from greater than zero to about 4;

where B is a second anion or negative-valence radical that is monovalent or polyvalent, and where b is an amount of B ~~ions~~ of valence r and b is from zero to about 4;

provided (n+n) is greater than or equal to 1;

further provided qa+br cannot be greater than 2m+3n, and provided that qa cannot equal 2m+3n;

and still further provided that (2m+3n+qa+br) is less than 3; and

where xH_2O represents excess waters of hydration, with x being zero or more;

with at least a clay and water to form a rheology-modified aqueous composition.

2. (currently amended) The method of Claim 1 wherein ~~M is~~ M' and M" are selected from Groups ~~IA, IIA~~, IIA, VIIB, VIII, IB or IIB of the Periodic Table.

3. (original) The method of Claim 2 wherein M' is selected from Mg, Ca, Mn, Fe, Co, Ni, Cu, and Zn, and M" is selected from Al, Ga and Fe.

4. (currently amended) The method of Claim ~~3~~ 1 wherein the material is a calcined hydrotalcite, a calcined or uncalcined hydrotalcite-like compound, or mixture thereof.

5. (original) The method of Claim 4 wherein the calcination is carried out in the presence of greater than about 1,000 ppm of sodium.

6. (original) The method of Claim 5 wherein the calcination is carried out in the presence of greater than about 10,000 ppm of sodium.

7. (currently amended) The method of Claim 1 wherein the material is prepared from a combination of MgO, Al_2O_3 and its hydrates, $Mg(OH)_2$ and its hydrates, $Na_2(CO_3)_2$ and its hydrates, $Ca(OH)_2$, $Fe(OH)_2$ and its hydrates, hydrotalcite and hydrotalcite-like compounds and their hydrates, and cellulosics, which have been calcined together sufficiently to produce the material conforming to the proportions of the empirical formula of Claim 1.

8. (original) The method of Claim 7 wherein the calcinations is carried out by heating at a temperature from about 750°C to about 1500°C.

9. (original) The method of Claim 8 wherein the temperature is from about 900°C to about 1000°C.

10. (original) The method of Claim 1 wherein the clay is selected from bentonite, chlorite, polygorskite, saconite, vermiculite, halloysite, sepiolite, illite, kaolinite, attapulgite, montmorillonite, Fuller's earth, and mixtures thereof.

11. (currently amended) The method of Claim 1 further comprising ~~as components~~ adding an aluminum oxide, a nitrogen-containing compound, or both.

12. (original) The method of Claim 11 wherein the aluminum oxide is crystalline or amorphous.

13. (original) The method of Claim 11 wherein the nitrogen-containing compound is selected from urea, thiourea, propionamide, acetylamide, amine compounds, and mixtures thereof.

14. (currently amended) The method of Claim 1 wherein the weight/weight ratio of clay to the material or materials having constituents ~~substantially~~ conforming to the proportions of the empirical formula ~~$M'_mM''_n(OH)_{(2m+3n+qa+br)}(A^q)_a(B^r)_b \cdot xH_2O$~~ of Claim 1 is from about 99:1 to about 9:1.

15. (currently amended) The method of Claim 11 wherein the amount of aluminum oxide is from about 5 to about 35 weight percent, and the amount of

the nitrogen-containing compound is from about 20 to about 120 weight percent, based on the weight of the clay and the dry material or materials conforming to the proportions of the empirical formula of Claim 1.

16. (original) The method of Claim 1 wherein (2m+3n+qa+br) is less than 2.

17. (original) The method of Claim 16 wherein (2m+3n+qa+br) is less than 1.

18. (currently amended) A dry rheology modification agent comprising a material prepared from a combination of MgO, Al_2O_3 and its hydrates, $Mg(OH)_2$ and its hydrates, $Na_2(CO_3)_2$ and its hydrates, $Ca(OH)_2$, $Fe(OH)_2$ and its hydrates, hydrotalcite and hydrotalcite-like compounds and their hydrates, and cellulosics, which have been calcined sufficiently to produce a material conforming to the proportions of the empirical formula ~~of Claim 1~~

$$M'_mM''_n(OH)_{(2m+3n+qa+br)}(A^q)_a(B^r)_b{\cdot}xH_20,$$

where M' represents at least one divalent metal cation and m is an amount of from greater than zero to about 8;

where M" represents at least one trivalent metal cation and n is an amount of from greater than zero to about 6;

where A is an anion or negative-valence radical that is monovalent or polyvalent, and a is an amount of A of valence q, provided that if A is monovalent, a is from greater than zero to about 8, and if A is polyvalent, a is from greater than zero to about 4;

where B is a second anion or negative-valence radical that is monovalent or polyvalent, and where b is an amount of B of valence r and b is from zero to about 4;

provided (n+n) is greater than or equal to 1;

further provided qa+br cannot be greater than 2m+3n, and provided that qa cannot equal 2m+3n;

and still further provided that (2m+3n+qa+br) is less than 3.

19. (currently amended) A dry rheology modification agent comprising a calcined hydrotalcite, a calcined hydrotalcite-like compound, or mixture th reof.

20. (original) The agent of Claim 18 or 19 further comprising clay, an aluminum oxide, a nitrogen-containing compound, or a combination thereof.

21. (currently amended) A rheology modified aqueous composition suitable for use in subterranean excavations comprising, as components, a material [having an]conforming to the proportions of the empirical formula[as shown in Claim 1,]

$$M'_mM''_n(OH)_{(2m+3n+qa+br)}(A^q)_a(B^r)_b \cdot xH_2O,$$

where M' represents at least one divalent metal cation and m is an amount of from greater than zero to about 8;

where M" represents at least one trivalent metal cation and n is an amount of from greater than zero to about 6;

where A is an anion or negative-valence radical that is monovalent or polyvalent, and a is an amount of A of valence q, provided that if A is monovalent, a is from greater than zero to about 8, and if A is polyvalent, a is from greater than zero to about 4;

B'

where B is a second anion or negative-valence radical that is monovalent or polyvalent, and where b is an amount of B of valence r and b is from zero to about 4;

provided (n+n) is greater than or equal to 1;

further provided qa+br cannot be greater than 2m+3n, and provided that qa cannot equal 2m+3n;

and still further provided that (2m+3n+qa+br) is less than 3;

clay; and water; and optionally further comprising as components an aluminum oxide, a nitrogen-containing compound, or a combination thereof.

22. (currently amended) The rheology modified aqueous composition of Claim 21 wherein the material is prepared from a combination of MgO, Al_2O_3 and its hydrates, $Mg(OH)_2$ and its hydrates, $Na_2(CO_3)_2$ and its hydrates, $Ca(OH)_2$, $Fe(OH)_2$ and its hydrates, hydrotalcite and hydrotalcite-like compounds and their hydrates, and cellulosics which have been calcined sufficiently to conform to the proportions of the empirical formula of Claim 1.

23. (original) The composition of Claim 21 wherein the components are present in proportions and at a level of distribution such that the composition is an elastic solid which exhibits stress-dependent fluidity.

24. (currently amended) The composition of Claim 21 wherein the material conforming to the proportions of the empirical formula of Claim 1 is a mixture of magnesium oxide, aluminum oxide (hydroxide), and sodium aluminate.

25. (canceled)

26. (canceled)

27. (canceled)

28. (canceled)

29. (canceled)

30. (canceled)

31. (canceled)

32. (canceled)

B'

33. (canceled)

34. (canceled)

35. (canceled)

36. (canceled)

37. (canceled)

38. (canceled)

39. (canceled)

40. (canceled)

41. (canceled)

42. (canceled)

43. (canceled)

44. (canceled)

45. (canceled)

46. (canceled)

47. (canceled)

48. (canceled)